UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/075,008	02/13/2002	Dayong Chen	8194-593	7141

			EXAMINER
20792	7590	09/16/2005	TRAN, KHANH C

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ART UNIT	PAPER NUMBER
2631	

DATE MAILED: 09/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/075,008	CHEN, DAYONG
	Examiner	Art Unit	
	Khanh Tran	2631	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>01 July 2005</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-30</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-6,9-16,19-26,29 and 30</u> is/are rejected.

7)☒ Claim(s) <u>7,8,17,18,27 and 28</u> is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>13 February 2002</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1. The Amendment filed on 07/01/2005 has been entered. Claims 1-30 are

pending in this Office action.

Response to Arguments

2. Applicant's arguments, see pages 4-10 of the Remarks, filed on 07/01/2005,

with respect to the rejection(s) of claim(s) 1, 2, 5, 6, 8-11, 15-16, 19-21, 25-26, 29, and

30 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore,

the rejection has been withdrawn. However, upon further consideration, a new

ground(s) of rejection is made in view of Lin et al. U.S. Patent 6,731,606 B2.

3. Amendments to the Specification has been reviewed and entered.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-6, 9-16, 19-26, and 29-30 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Lin et al. U.S. Patent 6,731,606 B2 in view admitted prior art in

the original disclosure.

Regarding claim 1, Lin et al. invention is directed to optimization of Outer Loop Power Control when the channel is capable of discontinuous transmission (DTX). In column 4, lines 45-55, the DTX detection algorithm may provide one of the following possible outcomes for every received frame: Good frame -- the algorithm indicates a frame was transmitted and the successfully decoded frame does not contain bit errors. Erasure -- the algorithm indicates a frame was transmitted but the decoded frame contains bit errors. DTX -- the algorithm indicates no frame was transmitted. Good frame corresponds to the claimed normal burst.

Lin et al. does not teach transmission of truncated burst in DTX mode as claimed in the application claim. Nevertheless, on page 2 line 20 via page 3 line 10, in the original disclosure, admitted prior art discusses when using discontinuous transmission, a wireless transmitter may transmit nothing when there is no speech activity, or may transmit truncated bursts containing only control information. Because Lin et al. teachings employs discontinuous transmission (DTX), it would have been obvious for one of ordinary skill in the art at the time of the invention that Lin et al. teachings can be modified to transmit truncated bursts as discussed in admitted prior art. The transmission of at least some truncated bursts may be desirable, to maintain a wireless connection between the wireless terminal and the base station serving it, and to transmit control information as taught in admitted prior art.

In column 8, lines 1-55, see figures 3A-3D, Lin et al. teaches that once

frame arrives at the receiver, the DTX algorithm proceeds to block 3112 where

DTX detection is performed. The DTX detection may be based on a combination

of factors including the received signal strength and received signal SNR. In view

of the foregoing teachings, the receiver decodes the frame and produces the

received signal strength and received signal SNR, which correspond to the

claimed at least one feature of the received information signal.

As discussed above, as discussed above, a DTX detection algorithm

typically returns one of three indications for the examined frame. The DTX

detection algorithm represented by block 3112 will typically return an indication of

a Good frame, an Erasure, or a DTX. In light of the aforementioned disclosure,

the act of returning an indication of a Good frame, an Erasure, or a DTX

correspond to the claimed step of preliminarily classifying the received

information signal.

The frame may include signal quality indicators such as parity bits or

Cyclic Redundancy Check CRC) bits that allow DTX detection to verify a Good

frame or the existence of bit errors within the frame. Differentiating between an

Erasure and a DTX may depend on the received SNR or some other measure of

signal quality.

In column 8, lines 30-50, following DTX detection in block 3112, the

algorithm proceeds to block 3120 to check to see if the DTX detection algorithm

determined that a Good frame was transmitted. The algorithm advances to block

3122 if a Good frame was detected. In column 9, lines 1-15, returning to block

3130, if an Erasure detection has not occurred, the flow chart proceeds to block

3140. In block 3140 the algorithm determines that a DTX detection occurred.

Previous blocks have already determined that the received frame was not

detected as a Good frame or an Erasure. Therefore, the DTX detection

algorithm likely detected a DTX frame and thus there is no reason to verify this in

a decision block.

Regarding claim 2, in column 9, lines 1-15, see also figures 3A and 3B, returning

to block 3130, if an Erasure detection has not occurred, the flow chart proceeds to block

3140. In block 3140 the algorithm determines that a DTX detection occurred. Previous

blocks have already determined that the received frame was not detected as a Good

frame or an Erasure. Therefore, the DTX detection algorithm likely detected a DTX

frame and thus there is no reason to verify this in a decision block. The teachings

"Previous blocks have already determined that the received frame was not detected as

a Good frame or an Erasure. Therefore, the DTX detection algorithm likely detected a

DTX frame" would correspond to the claimed limitations "at least one transition rule for

normal bursts and truncated bursts between the received information signal and a

previously received information signal".

Regarding claim 3, as recited in claim 1, the frame may include signal quality

indicators such as parity bits or Cyclic Redundancy Check CRC) bits that allow DTX

detection to verify a Good frame or the existence of bit errors within the frame. In view of the foregoing disclosure, cyclic redundancy checking is performed on every frame according to the teachings, e.g. previously received frame, current frame.

The preliminary classification is already discussed in claim 1. In column 8, lines 1-20, Lin et al. further teaches to update the algorithm on a frame-by-frame basis when the decision to transmit DTX signals is made on a frame-by-frame basis.

Regarding claim 4, claim 4 is rejected on the same ground as for claim 3 and further in view of claim 2.

Regarding claim 5, in column 8, lines 15-35, the frame may include signal quality indicators such as parity bits or Cyclic Redundancy Check (CRC) bits that allow decoding bit error rate within the frame.

Regarding claim 6, in column 8, lines 15-35, a DTX detection algorithm typically returns one of three indications for the examined frame. The DTX detection algorithm represented by block 3112 will typically return an indication of a Good frame, an Erasure, or a DTX. DTX detection may be based on the contents of the frame or may be based on a combination of factors including the received signal strength and received signal SNR. The frame may include signal quality indicators such as parity bits or Cyclic Redundancy Check (CRC) bits that allow DTX detection to verify a Good frame or the existence of bit errors within the frame.

Regarding claim 9, claim 9 is rejected on the same ground as for claim 1 because of similar scope.

Regarding claim 10, claim 10 is rejected on the same ground as for claim 2 because of similar scope.

Regarding claim 11, claim 11 is rejected on the same ground as for claim 1 because of similar scope. Furthermore, the method according to Lin et al. teachings performs all the claim steps in claim 1, therefore, it would have been obvious for one of ordinary skill in the art at the time of the invention that Lin et al. teachings can be modified to implement a system comprising functional elements as set forth in the application claim. In column 12, lines 40-60, Lin et al. teaches that those of skill will further appreciate that the various illustrative logical blocks, modules, circuits, and algorithm steps described in connection with the embodiments disclosed herein may be implemented as electronic hardware, computer software, or combinations of both. To clearly illustrate this interchangeability of hardware and software, various illustrative components, blocks, modules, circuits, and steps have been described above generally in terms of their functionality. Whether such functionality is implemented as hardware or software depends upon the particular application and design constraints imposed on the overall system.

Regarding claim 12, using similar argument and motivation as discussed in claim 11, claim 12 is rejected on the same ground as for claim 2 because of similar scope.

Regarding claim 13, using similar argument and motivation as discussed in claim 11, claim 13 is rejected on the same ground as for claim 3 because of similar scope.

Regarding claim 14, using similar argument and motivation as discussed in claim 11, claim 14 is rejected on the same ground as for claim 4 because of similar scope.

Regarding claim 15, using similar argument and motivation as discussed in claim 11, claim 15 is rejected on the same ground as for claim 5 because of similar scope.

Regarding claim 16, using similar argument and motivation as discussed in claim 11, claim 16 is rejected on the same ground as for claim 6 because of similar scope.

Regarding claim 19, using similar argument and motivation as discussed in claim 11, claim 19 is rejected on the same ground as for claim 9 because of similar scope.

Regarding claim 20, using similar argument and motivation as discussed in claim 11, claim 20 is rejected on the same ground as for claim 10 because of similar scope.

Regarding claim 21, claim 21 is rejected on the same ground as for claim 11 because of similar scope.

Regarding claim 22, claim 22 is rejected on the same ground as for claim 12 because of similar scope.

Regarding claim 23, claim 23 is rejected on the same ground as for claim 13 because of similar scope.

Regarding claim 24, claim 24 is rejected on the same ground as for claim 14 because of similar scope.

Regarding claim 25, claim 25 is rejected on the same ground as for claim 15 because of similar scope.

Regarding claim 26, claim 26 is rejected on the same ground as for claim 16 because of similar scope.

Regarding claim 29, claim 29 is rejected on the same ground as for claim 21 because of similar scope.

Regarding claim 30, claim 30 is rejected on the same ground as for claim 22 because of similar scope.

Allowable Subject Matter

5. Claims 7-8, 17-18, and 27-28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Wang et al. U.S. Patent 6,587,447 B1 discloses "Method And System For Performing Outer Loop Power Control In Discontinuous Transmission Mode".

Su U.S. Patent 6,510,409 B1 discloses "Intelligent Discontinuous Transmission And Comfort Noise Generation Scheme For Pulse Code Modulation Speech Coders".

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Tran whose telephone number is 571-272-3007. The examiner can normally be reached on Monday - Friday from 08:00 AM - 05:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on 571-272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KCT

Thanhcong Tran   09/14/2005

Examiner   KHANH   TRAN